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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/678,017	10/04/2000	Koichiro Wanda	35.C14853	5637

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FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

PHAM, THIERRY L

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/678,017

Applicant(s)

WANDA ET AL.

Examiner

Thierry L Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-76 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-76 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Oath/Declaration

1. Signed Declaration have been received and acknowledged and entered as paper No. 3.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mima et al (U.S. 2002/0101604), and in view of Suzuki et al (U.S. 6665081).

Regarding claim 1, Mima discloses an information processing apparatus (computer, fig. 2) for dividing a print job (dividing a print job into multiple small jobs (parallel printings, fig. 2, page 1, par. 12 and page 2, pars. 17-19) to make a plurality of printers (plurality of printers, fig. 1) execute a print process, comprising:

(1) output control means (document monitor, fig. 2) for generating divided print data (dividing print job into multiple small print job (parallel printings, page 1, par. 12 and page 2, pars. 17-19 and page 4, par. 49) and outputting (transmitting the allocated/divided print data to the printers connected via network, fig. 1) the divided data print data to the printers in order to print the divided print jobs at the printers.

However, Mima does not explicitly disclose an information processing apparatus comprising spooling means for spooling data in specific file formats in accordance with a combination of a plurality of printers for outputting the divided print jobs.

Suzuki, in the same field of endeavor for printing, teaches an information processing apparatus (computer, fig. 1) comprising spooling means (spooler incorporated in the OS 7 of

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computer 1, fig. 2) for spooling data in specific file formats (i.e. intermediate data format, fig. 1) in accordance with a combination of a plurality of printers for outputting the divided print jobs.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Mima as per teachings of Suzuki because of a following reason: (1) by dividing a print job into multiple small jobs and distributing (parallel printings) it to a plurality of printers will reduce processing/printing time and to improve the efficiency/performance of the network printers (Mima, page 1, par. 12).

Therefore, it would have been obvious to combine Mima with Suzuki to obtain the invention as specified in claim 1.

Regarding claim 2, Mima further teaches an information processing apparatus according to claim 1, further comprising registering means for registering (fig. 5) a plurality of output destination printers.

Regarding claim 3, Mima further teaches an information processing apparatus according to claim 2, wherein the print data is generated by a printer driver (device driver, fig. 2, for converting document data into print data, page 3, par. 42) of each of the plurality of registered printers.

Regarding claim 4, Suzuki further teaches an information processing apparatus according to claim 1, further comprising judging means (controller 11, fig. 4) for judging a combination of the plurality of printers and judging whether device dependent data or device independent data (PDL or Intermediate code, fig. 1, abstract, col. 4, lines 50-67 to col. 5, lines 1-56) is spooled.

Regarding claim 5, Suzuki further teaches an information processing apparatus according to claim 4, wherein said judging means judges (printer driver, fig. 1) whether all of the plurality of printers are printers using a printer language capable of dividing the print job in a page unit (col. 2, lines 40-67).

Regarding claim 6, Mima further teaches an information processing apparatus according to claim 4, wherein said judging means judges whether all of the plurality of printers are printers of a same type (figs. 1 and 5).

Regarding claim 7, Mima further teaches an information processing apparatus according to claim 4, wherein said judging means judges whether all of the plurality of printers have a same printer drivers (device driver incorporated in the computer controls plurality of printers; therefore, all printers are using the same printer driver, fig. 2).

Regarding claim 8, Suzuki further teaches an information processing apparatus according to claim 4, wherein the device dependent data is RAW (bit map image data, col. 2, lines 2-17) data and device independent data is EMF (intermediate data, col. 2, lines 2-17).

Regarding claim 9, Mima further teaches an information processing apparatus according to claim 1, further comprising:

- (1) judging means (document monitor, fig. 2) for judging whether a page number of a page to be printed can be designated (designating a particular page from a print job to be printed, page 1, par. 12) in the print job to be output from each printer; and
- (2) transfer control means (computer, fig. 2) for copying the print job as many as the number of printers for outputting the divided print jobs (a single job can be transmitted to multiple printers connected via network, fig. 1), adding a page number (page 4, par. 49) of a page to be printed to each of the copied print jobs, and transferring the copied print jobs to the printers, if said judging means judges that the page number can be designated, and if said judging means judges that the page number cannot be designated, dividing the print jobs for each page to be printed at the printers for distributed printing and transferring the divided print jobs to the printers (dividing a print job into multiple small jobs (parallel printings, fig. 2, page 1, par. 12 and page 2, pars. 17-19).

Regarding claim 10, Mima further teaches an information processing apparatus according

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to claim 9, wherein said judging means judges from page designation print performance information of each printer whether the page number of a page to be printed can be designated in the print job to be output from each printer (print report corresponding to each printers, fig. 6, page 4, par. 46-49).

Regarding claim 11, Mima further teaches an information processing apparatus according to claim 2, further comprising:

(1) re-arranging means (if the errors occur in of the distributed printers, then transmitting the unprinted data to other printer, page 6, par. 62-64) for re-arranging a combination of a plurality of printers for outputting the divided print jobs, among the plurality of printers registered by said registering means, if a printer for outputting the divided print job cannot execute a print process; and

(2) report forming means (error handler, fig. 8) for forming a distributed printing result report in accordance with a distributed printing result obtained by the printers by the printers re-arranged by said re-arranging means, wherein after the distributed printing by the re-arranged printers, the distributed printing result report formed (print reports, page 4, par. 45-51) by said report forming means is output to one of the re-arranged printers.

Regarding claim 12, Mima further teaches an information processing apparatus according to claim 2, further comprising distributed data generating means for dividing the print job and making a printer driver corresponding to each printer generate print data to print the print data (device driver, fig. 2, for converting document data into print data, page 3, par. 42) at the printers registered by said registering means, wherein said distributed data generating means controls each printer driver to generate the print data added with an off-line command (page 1, par. 13).

Regarding claim 13, Mima further teaches an information processing apparatus according to claim 12, wherein the printer driver (printer driver is incorporated in the computers and these computers control the printers, fig. 2) corresponding to each of the printers registered by said registering means generate the print data.

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Regarding claim 14, Mima further teaches an information process apparatus according to claim 11, wherein if all the printers cannot execute the print process, this effect is output to a printer which outputs the distributed printing result when an error occurs (malfunction within the printers, fig. 6, page 2, par. 17-19).

Regarding claim 15, Suzuki further teaches an information processing apparatus according to claim 11, wherein said output control means generates the print data by acquiring data of an intermediate data format (intermediate code format, fig. 1) spooled by said spooling means.

Regarding claim 16, Mima further teaches an information processing apparatus according to claim 12, wherein said registering means registers a printer to which the distributed printing result report (output printing result report, page 2, par. 17-19 and page 4, par. 45-49) is output.

Regarding claim 17, Mima further teaches an information processing apparatus according to claim 11, wherein the print data is generated by adding an off-line command (a command to designate a particular page of a document to be printed, page 2, par. 20) to the print data for distributed printing.

Regarding claim 18, Mima further teaches an information processing apparatus according to claim 11, further comprising:

- (1) judging means for judging whether each of the printers registered by said registering means outputs the print job normally (normal printing message, page 4, par. 45);
- (2) wherein the distributed printing result formed by said report forming means is output to a printer to which the report is output, if said judging means judges that the print job for each printer cannot output normally (output printing result report including malfunction errors occur within the printers, page 2, par. 17-19 and page 4, par. 45-49).

Regarding claim 19, Mima further teaches an information processing apparatus according to claim 11, further comprising: detecting means (printer monitor, fig. 1) for detecting a print job

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process error (errors occur within the printers, page 2, par. 18-19) by monitoring a process state of the print job distributed to the printers by said output control means, wherein said re-arranging means re-arranges (designate to a different printers for outputting unprinted data, page 2, par. 18-19 and page 6, par. 62-647) a combination of a plurality of printers capable of normally outputting the print job distributed to the printers by said output control means, in accordance with a detection result of the print job process error by said detecting means.

Regarding claims 20-38: Claims 20-38 are the method claims corresponding to the apparatus claims 1-19 (respectively). The method claims are included by the operation of the apparatus claims. Please see claims rejection basis/rationale as described in claims 1-19 above.

Claims 39-57 correspond to claims 1-19 except computer readable memory medium for storing program is claimed rather than printing system or data output apparatus. All computers have some type of computer readable memory medium (memory, fig. 2 of Suzuki) for storing computer programs, hence claims 39-57 would be rejected using the same rationale as in claims 1-19.

Regarding claims 58-76, please see rejection rationale/basis as described in claims 39-57 above.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L Pham whose telephone number is (703) 305-1897. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

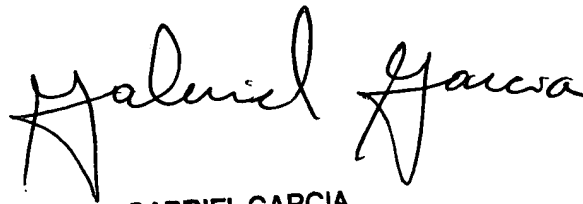
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K Moore can be reached on (703)308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham

TP

A handwritten signature in black ink, appearing to read "Gabriel Garcia". The signature is fluid and cursive, with the first name "Gabriel" and the last name "Garcia" clearly distinguishable.

**GABRIEL GARCIA
PRIMARY EXAMINER**